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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,154	12/20/2001	Michael P. Cornaby	10559-642001/P12486	3570

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FISH & RICHARDSON, PC  
12390 EL CAMINO REAL  
SAN DIEGO, CA 92130-2081

EXAMINER
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KIM, KENNETH S

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/032,154

Applicant(s)

CORNABY ET AL.

Examiner

Kenneth S KIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

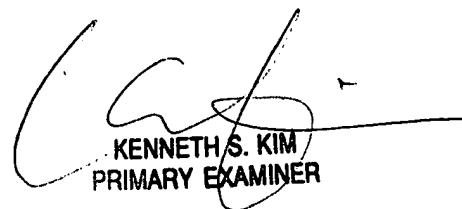
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
KENNETH S. KIM  
PRIMARY EXAMINER

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. Claims 1-38 remain for examination.
2. The abstract of the disclosure is objected to because the current abstract does not reflect the inventive feature of the claimed invention to distinguish over the prior art. Correction is required. See MPEP § 608.01(b).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- (a) Claim 1, It is not clear how the “*out-of-order* microinstruction pointer stack” is used in the processor.

It is not clear what is the structure of the stack and how various elements of the structure are used. (How are the structure of the stack and the use of various elements of the structure different from those of other stacks known in the art.)

The phrase “our-of-order” does not provide any limitation as to the function of the stack (that distinguishes it from what is already known). An ordinary stack can be used in any manner, which can be described as “out-of-order”.

- (b) Claim 2, it is not clear what various fields signify and how they are used.
- (c) Claims 8 and 32, the same as (a).
- (d) Claim 9, the same as (b).

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(e) The use of microinstruction, microcode, and microoperations needs to be consistent or their relationships among each other needs to be recited.

The rejection is respectfully maintained for the deficiencies have not been corrected and applicant's argument is not persuasive to overcome the rejection.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 4, 8, 10, 11, 15-22, and 26-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Gage, U.S. Patent No. 4,890,221.

Gage teaches the invention as set forth in the previous office action incorporated herein by reference.

The rejection is maintained for the reference teaches a microinstruction pointer stack for storing pointers in a microcode execution core and no limitation is recited regarding the "out-of-order" nature of the stack.

7. Applicant's arguments filed January 5, 2005 have been fully considered but they are not persuasive.

Applicant argued that the stack is distinguished from that in the cited reference, because *microinstruction pointers that are stored in an out-of-order stack are aggressively reordered to allow them to execute as quickly as their input micro-operands are ready*.

Applicant's argument does not make sense, since the pointers are addresses and not instructions and is out of context as to what are the operands and their relevance. Furthermore, the claims do not recite such limitation.

Applicant also argued that microinstructions are used to manipulate the microinstruction pointer stack. The very operation of push and pop microinstructions manipulates a microstack. Furthermore, the reference teaches the manipulation of the stack to restore to a correct state using microinstruction control bits stored in the reconstruction silo (col. 5, line 61 – col. 6, line 16).

Applicant further argued that the microstack in Gage is not "out-of-order". The reference, however, teaches an out-of-order use of the stack by storing return addresses for the calls occurring during the trap shadow period, which calls are out of order with respect to the trap processing, and the out-of-order stored return addresses are removed during the reconstruction process (col. 5, lines 1-17).

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

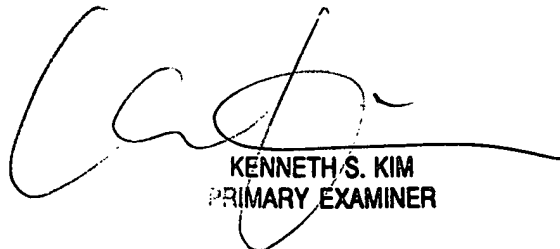
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (571) 272-3627. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

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February 2, 2005



KENNETH S. KIM  
PRIMARY EXAMINER